

A NYSERDA Sponsored Program



Keith Christensen

Aggregating Local Government Wind Purchases in NYS

October 26, 2005



Village of Croton 25% Wind

Village of Croton-on-Hudson

First 25% Wind Powered NYS Municipality



February 12, 2003







52 Municipalities

NYS Municipal Ne	w Wind Energy	contracts to date:
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		Purchase
1	Village of Croton-on-Hudson (25%)	435,000
2	Town of New Castle (29%)	1,429,488
3	Town of Woodstock (29%) 1/1/04 - 3 yrs	183,165
4	Town of North Castle (29%) 1/1/04 - 3 yrs	760,817
	First Price Reduction Reached	!
5	Town of LaGrange (10%) 10/1/03 - 3 yrs	23,579
6	Town of Pine Plains (60%) 3/04 - 7 yr Renewal	184,166
7	Town of Caroline (27%) 12/16/03 - 1 yr	22,007
8	Town of Red Hook (50%) 12/03 - 3 yrs	191,800
9	Town of Fishkill (100%) 3/04 - 7 yr Renewal	1,549,332
10	Village of Tivoli (75%) 12/04 - 7 yrs	185,201
11	Town of Stanford (50%) 6/2005 - 3 yrs - renewal	35,073
12	Town of Milan (10%)	19,910
13	Town of New Paltz (33%) 2/04 - 5 yrs	123,197
14	Town of Clinton (50%) 4/04 - 5 yrs	32,884
15	Town of Dover (25%) 4/04 - 5 yrs	89,702
16	Village of Rhinebeck (10%) 6/04 - 5 yrs.	44,586
17	Town of North Salem (20%) 4/05 - 1 yr - renewal	14,029
18	Town of Pound Ridge (100%) 1/05 - 7 yr Renewal	353,688
19	Town of Pleasant Valley (100%) 5/04 - 5 yrs	399,857
20	Town of Bedford (25%) 6/04 5 years	508,962
21	Town of Philipstown (50%) 6/04 5 years	90,396
22	Village of Ardsley (50%) 6/04 5 years	341,507
23	Town of Yorktown (10%) 6/05 - 3 year - renewal	647,689
24	Livingston County (10%) 8/2004 - 5 years	499,320
25	City of Saratoga (42%) 9/2004 - 5 years	2,916,667



52 Municipalities

26	Town of Amenia (20%) 9/2004 - 5 years	63,235
27	Town of Lewisboro (19%) 9/2004 - 2 years	166,650
28	Town of Southold (100%) 7/04 5 years	807,263
29	Town of Southampton (100%) 10/04 5 years	3,466,612
	SECOND Price Reduction Reached! -	
30	Town of Roslyn Estates (100%) 10/04 5 years	102,877
31	Village of Briarcliff Manor (25%) 10/04 1 year	636,717
32	Village of Tarrytown (25%) 11/04 5 years	706,436
33	Town of Shelter Island (100%) 12/04 5 years	275,533
34	Town of Wappingers (25%) 12/04 5 years	157,000
35	Village of Mamaroneck (10%) 12/04 5 years	263,019
36	Village of Bronxville (20%) 12/04 7 years	207,362
37	Village of Irvington (100%) 2/15 5 years	1,675,111
38	Village of East Hampon (100%) 3/05 3 years	711,183
39	Village of Red Hook (25%) 3/05 3 years	67,361
40	Village of Fishkill (85%) 3/05 7 years	1,976,167
41	Town of Riverhead (5%) 4/05 5 years	357,143
42	Town of Beekman (25%) 5/05 5 years	75,692
43	Rockland County (5%) 5/05 1 year	777,778
44	Rockland Com. College (10%) 6/05 1 year	650,000
45	Town of Babylon (10%) 6/05 7 years	1,563,525
46	• , , ,	71,450
47	Otsego County (10%) 6/05 5 years	160,000
48	Ulster County (10%) 6/05 7 years	1,400,542
49	Village of Dobbs Ferry (25%) 6/05 7 years	400,503
50	Town of Mamaroneck (%) 6/05 2 years	168,534
51	Village of Pleasantville (25%) 7/05 1 year	278,776
52	Town of Ramapo (5%) 10/05 1 year	195,000

TOTAL ANNUAL KILOWATT HOURS OF WIND PURCHASED:

28,463,490



Local Press

THE MILLERTON NEWS, Thursday, October 30, 2003

Town Board Hears Wind Energy Proposal

By WHITNEY JOSEPH

Staff Reporter

PINE PLAINS — Town Board members listened Oct. 16 to a presentation about wind energy and reasons why the town should invest in a cleaner power supply.

Keith Christensen, from Community Energy, was on hand to explain how wind energy works and why many municipalities across the country are turning toward alternative energy sources.

"Electricity is the largest single Each turbine product polluter in the world," Christensen said. "Forty percent of all carbon dioxide is a result of electricity. Out of the 3,000 lakes in New York state, 500 are dead because of acid rain." Christensen admi

Gov. George Pataki has reportedly endorsed the idea of using wind energy to power up the Empire State. According to Christensen, the governor said he wants 20 percent of New York's energy to be derived from wind by the year 2010.

Right now, 29 percent of the state's electricity comes from six nuclear power plants, 26 percent from natural gas, 9 percent is oil based, 18 percent

by dro, 16 percent coal and less than ! percent from renewable energy.

A9

Town Board members said they were receptive to learning more about wind energy, which is both emission free and fuel free.

"I'm definitely interested in looking into this," Supervisor Gregg Pulver said last week. "I think this could lead to a commitment from the town."

Pulver asked what the visual impact was of installing wind-energy producing turbines, which resemble windmills from the Dutch landscape. Each turbine produces roughly 4,000 megawatts of electricity per year—enough to power 500 homes. Aturbine is approximately the size of a fully-grown redwood tree.

Christensen admitted the turbines were not easily overlooked, but said despite the height, they were quite thin and could work within many landscapes. The bottom line, if the community supports bringing wind energy in, it needs to allow for the equipment that goes with it.

"We need three things," Christensen said. "We need wind, we need transmission lines and we need community support."

Pine Plains Endorses A Cleaner Energy

By WHITNEY JOSEPH Staff Reporter

PINE PLAINS — With evident pride, the Town Board decided to become the first town in New York to purchase 30 percent of its energy from a clean source wind.

Last Thursday's decision came following a presentation last month from Keith Christensen of Community Energy.

"To me there are a lot of benefits," town Supervisor Gregg Pulver said. "We're finally trying to get clean energy and get away from coal, gas and nuclear energy. I think it's an investment in our future."

The board was in agreement that the move was vital in order to wean the town, and the country, from traditional, "dirty" energy sources.

According to Christensen, electricity is the largest single polluter in the world, which is why many areas are turning to alternative energy sources, like wind.

Roughly 29 percent of the state's electricity comes from six nuclear power plants, 26 percent from natural gas, 9 percent is oil-based, 18 percent hydro, 16 percent coal and less than 1 percent from renewable energy.

Windenergy, on the other hand, is both emission and fuel free. Wind turbines, which resemble traditional Dutch windmills, produce an estimated 4,000 megawatts of electricity per year — enough to power 500 homes.

The turbines, which reach similar heights as California redwood trees, are already scattered throughout the "wind farms" in the Northeast.

Pine Plains would likely derive its wind energy from wind farms in the northwestem part of the state.

"The dairy farmers get a boost too, because they get a little extra income," Pulver said.

Last year the town spent nearly \$35,000 on energy costs; once it derives 30 percent of its energy from wind, the town's energy bill will see an increase of \$1,500.

"It's an investment in our future," Council woman Dorean Gardner said.

"Clean energy is worth the premium that it costs," agreed Councilman Rick Butler.

The board unanimously approved Pulver's motion to be the first town in New York state to go to 30 percent clean energy.

"That would be great," the supervisor said with a smile, as he thanked the board for supporting the resolution.



Audobon Article

renewable energy

by keith kloor illustration by jonathan carlson



BREATH OF FRESH AIR

PLEASANT VALLEY WILL SOON BE AN even nicer place to live than its name would suggest. In June it became the first town in New York to acquire all its electricity from wind turbines, thus joining an increasing number of businesses, colleges, and townships nationwide that are switching from fossil fuels to renewable energy. "We want to do our part to make the air cleaner and help the environment," says John McNair, the Republican town supervisor.

It's no small part. The electricity Pleasant Valley purchases from a wind farm outside Syracuse creates zero pollution. That means the juice powering the town's lights, office buildings, and ball fields will no longer be responsible for emitting the annual equivalent of 356,000 pounds of carbon dioxide, a main global warming gas.

Improved technology and rising demand have cut the price of wind power. (Acknowledging a growing controversy over potential harm to birds, Audubon New York just passed a resolution supporting "wind power as a clean, renewable source with few environmental impacts" but called for surveys in "high-risk areas" to mitigate mortality.) In Pleasant Valley, 90 miles north of New York City, the change will cost the town's 10,000

residents less than an extra \$2 per year, per household, says McNair, who signed the agreement with Community Energy, a company that represents wind farms across the Northeast. So far 23 New York municipalities—along with dozens of universities, businesses, and government institutions—have signed on to buy the company's wind power.

It helps that George Pataki, New York's environmentally minded Republican governor, has pledged that by 2013 the state will get a quarter of its power from wind, solar, and other renewable resources. Health concerns are a key factor for wind converts. A new study from Abt Associates, a consulting firm, found that air pollution from power plants causes the premature deaths of 23,600 Americans each year, mostly from respiratory and cardiac ailments. The analysis also reported that hundreds of thousands more suffer from asthma attacks, heart problems, and respiratory diseases as a result of soot from sulfur dioxide and nitrogen oxide emissions.

"People don't really know where their energy comes from, or what the impacts are," says McNair, urging other towns to follow Pleasant Valley's lead. "I feel like the more people who get involved, all of us will breathe cleaner air, and live a little longer."



1st City

HE DAILY GAZETTE

The Independent Voice of the Capital Region

THURSDAY September 23, 2004

Local News

Saratoga to purchase wind power

By ROBIN K. COOPER

Gazette Reporter

SARATOGA SPRINGS — Sazatoga Springs became the first city in New York to buy wind power this month when it signed a five-year deal with Pennsylvania-based Community Energy to buy enough wind energy to run some of its municipal buildings.

The city will use the power to run City Hall, the two city ice rinks, the water treatment plant, the drink hall and the city garage.

"That's a small price for business and government to pay when you think of the benefits."

Robert Israel

Saratoga Springs businessman

The Saratoga Springs Public Library also recently agreed to buy enough wind power to provide 3 percent of electricity needed to operate the Putnam . Jion in gas and electricity costs. Street building.

The cost for the library will: be about \$50 a month higher than it already pays, said Ken-

neth Bollerud, the library board. chairman.

In recent years, the city has paid about \$900,000 to \$1.2 mil-

Public Works Commissioner Thomas McTygue said the new wind power contract will cost the city an additional \$44,000 a.

year. "That's a small price for business and government to pay when you think of the benefits," said Robert Israel, owner of the Inn at Saratoga, which also has purchased wind energy to run the inn and restaurant business or South Broadway.

"We see all around us the effects of dependence on Middle East oil." Israel said.

Community Energy consultant Marion Trieste of Saratoga Springs said more wind power users are needed to encourage. the development of wind farms, which ultimately will cut the New York state to boost its reliance on renewable energy sources over next nine years, Page B12.

cost of wind energy.

Wind power is attractive because it is 100 percent pollutionfree, Trieste said.

There are 27 municipalities around the state that use wind power, she said, but Saratoga Springs was the first city to do it.

The wind energy will be supplied by the Fenner Windpower

See SARATOGA, Page B3



1st County



Livingston taps wind in a state first

Residents spark choice in electricity

Dolores Orman

Staff writer

(September 24, 2004) — GENESEO — Stanley and Barbara Johnson do the little things to save energy.

They have solar panels on their house to heat it in winter and generate hot water in summer. They have an adjustable thermostat. They turn off the lights when leaving a room. They recycle.

Now they've earned what might be the biggest feather in their environmental caps: They helped persuade Livingston to become the first county government in the state to harness the wind for some of its electricity.

"I feel strongly about the environment," said Stanley Johnson, 53, a carrier for the U.S. Postal Service. "We only have one. If we misuse and abuse it, what's left for the future?"

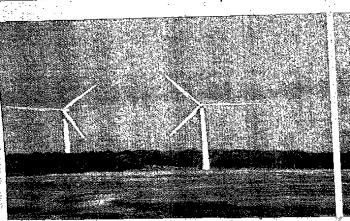


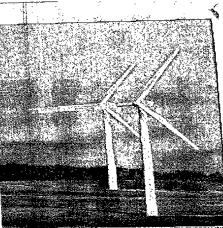
MAX SCHOLTE STAFF PHOTOGRAPHER

Barbara and Stanley Johnson at a window in their solar canel-equipped home in Geneseo. They helped permade Livinoston County to harness the wind for some of its electricity. [Day in Photos]



1st in Area





A wind farm, like this one near Syracuse, could soon be sending energy to Southold Town.

HARNESSING ELECTRICITY

Southold energy plan in the wind

 Though town won't be building windmills, it would become first on LI to acquire the green power source

BY MITCHELL FREEDMAN STAFF WRITER

Southold's elected officials have decided to make their town the first on Long Island to use electricity produced by wind power.

"Our attorney is starting to work on a draft contract now," said Supervisor Joshua Horton. "I'm a staunch believer in it... Our town board is very supportive of the concept."

Under the plan, there will be

cant reductions in its pow r use. Horton expects the ne's savings to just about balance out the extra cost of electricity. "It should be a wash," he said

Because of the way energy is produced and moved arou of the nation's power grid, thei will not be dedicated windmil generating power just for So thold Town. Instead, Communi y Energy will ship enough wind powered energy to LIPA ovic the course of a year to mate; the town's total electric use.

community Energy at eady sells wind-produced electricity to several municipalities in New York State, including V codstock, Red Hook and Ardsly.

Gwynn Schroeder, Sou hold coordinator for the North Fork Environmental Council, sai the

build a wind-generating turbine.

"It definitely shows an environmental appreciation," Ampersaid, "If we don't start with these intermediate steps, there is the danger we will never adopt true alternate energy choices. It's encouraging a way of thinking that is somewhat removed from say, the wind generation project adopted carlier this month by LIPA."

LIPA last month approved a project to build a wind farm of 39 windmills 3 to 5 miles southwest of Robert Moses State Park which would generate 100 megawatts of power.

watts of power.

LIPA chairman Richard M.

Kessel expressed hope
Southold's decision would be an
example to other municipalities,
school districts and local busi-



1st /100%

-SOUTHERN DUTCHESS NEWS-December 24, 2003

Blowin' in the wind: Fishkill taps new power source

By John Darcy FISHKILL — The town will use wind-power technology as a fuelwhite-power technicogy as a fuer-free electric supply for more than half of its municipal needs. The town board approved spend-ing \$15,803 annually for the next

three years for the project.
"We're very excited about this,"

said Supervisor Joan Pagones. "It's affordable, and as time goes on I envision the town purchasing more and more." She foresees the town eventually "weaning ourselves off normal sources of energy."

The town is the first municipality to sign on at "the high level of 60 percent," said Keith Christensen of Community Energy. Other Dutchess areas - LaGrange, Red Hook and Pine Plains — have signed on at lower levels, he said.

Fishkill's 60 percent wind-power plan is believed to be the highest level of all municipalities in New York state.

Christensen said wind is a "clean, green and renewable" power source that is a "high priority" for the gov-Continued on pg 2

ernor and the state Energy Research and Development Authority, as well as for the environmental communi-

In New York, Community Energy uses wind turbines to produce power at its Fenner Wind Farm facility in upstate Madison County. The product is then placed on the state power grid on behalf of a given customer, in this case the town of Fishkill.

"By putting that power on the grid for Fishkill, it means traditional electric plants produce that much less," he said.

Community Energy literature states "well-documented" effects of traditional fossil fuel and nuclear plants include poor air quality, regional haze, acid rain and global warming. Health risks include respiratory and pulmonary problems.

Wind power consumers pay a premium for the environmentally safe source. They continue to receive service from their traditional electric company. Wind energy costs more to produce than conventional energy, but improving turbine technology and a developing market continue to drive the cost down, the company's brochure states.

Wind power is the "fastest growing source of electricity in the world," Christensen said.

At a recent meeting, Dutchess supervisors and mayors were "very impressed" with the benefits of wind power, she said.

Pagones' "progressive action sends a clear, exciting message to the local community about the supervisor's leadership in choosing this affordable, emissions-free energy source," Christensen said.

"It's time to expect government to act," Pagones said. "We can't wait any longer for solutions to fall upon us, or react to crisis situations. We have wind power in New York state. the price is right, the time is right. Wind is not subject to raw-material supply pricing, wind does not pol-lute. Wind is a win-win for the town and for out future."

Deputy Supervisor Steve Ferguson said wind farms help to keep "open lands open" and the technology is nonpolluting, which is a big issue right now."

For municipalities signing on, the company donates some of the power to local schools, Christensen said.



Awards





WHY?

Why do cash strapped municipalities (some facing 20+% tax increases) choose to pay more for electricity from wind power?

- 1. Environmental (green)
- 2. Energy Independence (patriotism)
 - 3. Opposed to nuclear (fear)



Air Impacts of Traditional Electric Generation



40% of all Carbon Dioxide (CO2) leading greenhouse gas

67% of all Sulfur Dioxide (SO2) — leading precursor to acid rain





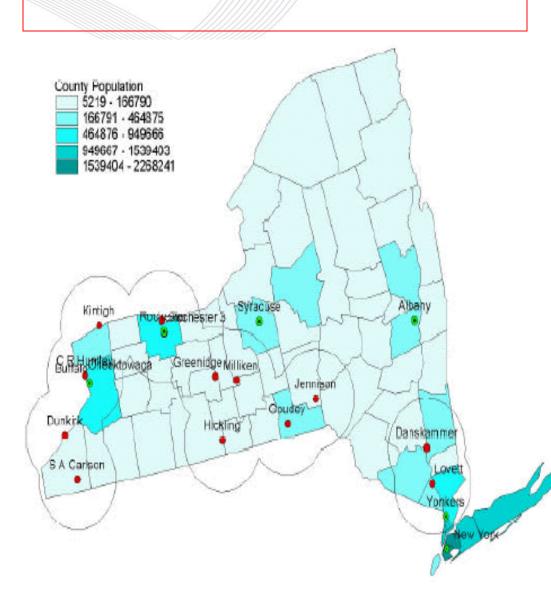
25% of all Nitrogen Oxide (NOX) - major component of smog



COAL

~16% of New York State's Electricity comes from Burning Coal

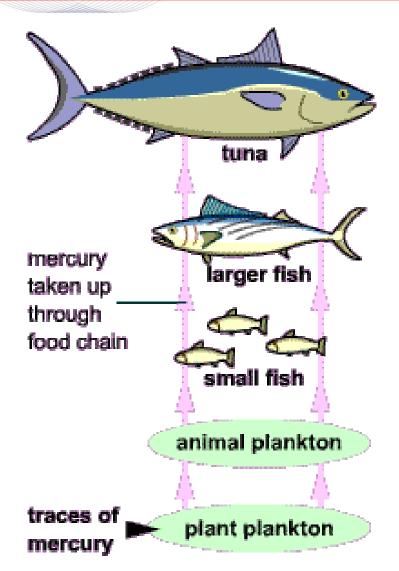
- 10 Coal Fired Power Plants Currently Operating in NYS
- 13,807,447 people live within a 30 mi radius of coal plants in NY (3,199,588 children)
- 60% of mercury in Northeast comes from regional sources





Mercury Contamination

- Coal fired power plants are the largest source of mercury pollution
- Mercury is a toxic metal that is both persistent and bioaccumulates. Fish advisories for women of child bearing age and children.
- Mercury is a known neurotoxin and high levels of exposure are linked to neurological disorders and brain damage





NYS Lakes





NYS Lakes

That was one of the 500

of New York's

3,000 lakes

that are dead

from Acid Rain



Air Pollution Impacts

1 in 13 US
school age children
now have asthma—
2x the rate of 20 years ago

Some areas in New York have childhood asthma rates as high as 25%

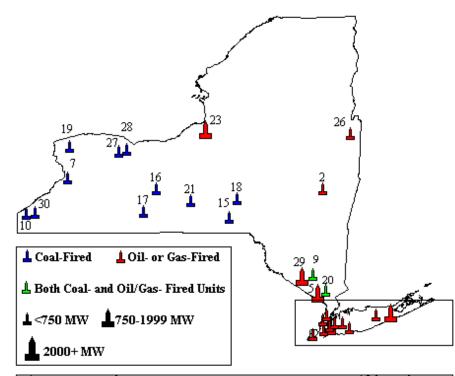


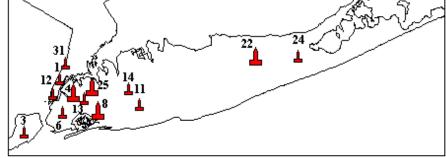
OIL

~10% of New York State's Electricity comes from Oil burning power plants





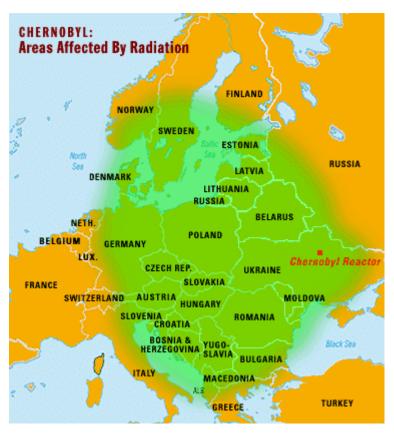


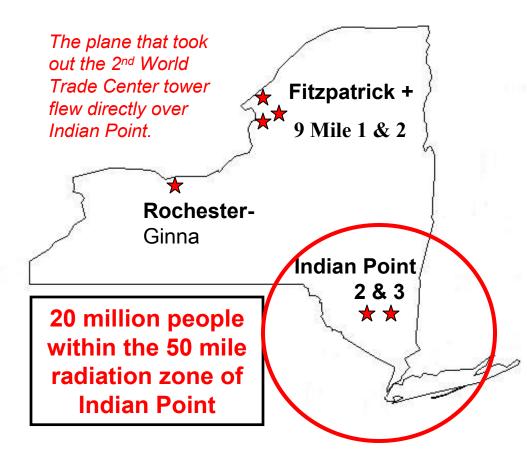




NYS Nuclear Power Plants

29% of NYS electricity comes from 6 nuclear power plants







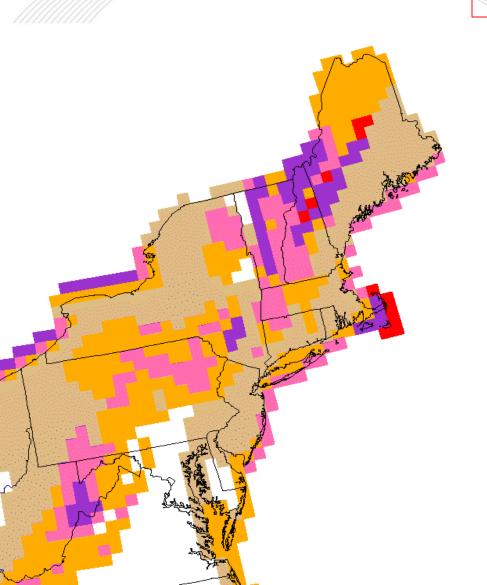
Why Wind Power?

- > Emissions Free = No Pollution
- > Fuel Free = Energy Independence
- Economic Development Tool
- Less Centralized =

Reduced Terrorist Target



NYS Wind Resource

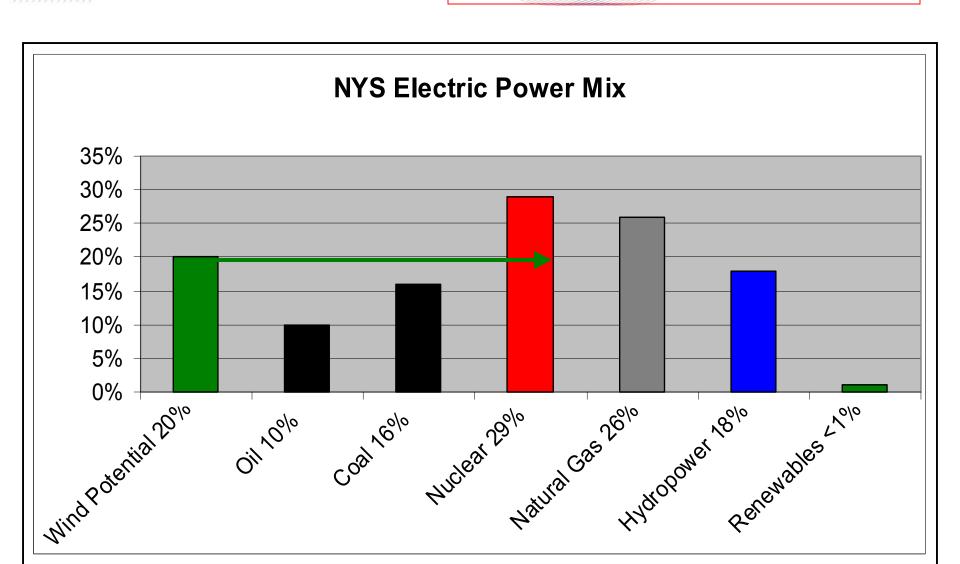


NYS has wind resources for more than 5,000 MW of new land-based wind turbines (10% of NYS total energy usage) plus another 5,200 MW of offshore wind.

Total NYS
Potential: 20%



NYS Electric Generation Mix





Vision Realized

Projects (MW)	2001	2002-2004	2005
Somerset, PA	9	9	9
Mill Run, PA	15	15	15
Backbone, WV		66	66
Waymart		65	65
Wethersfield		7	7
Fenner		30	30
Bear Creek			24
Atlantic City, NJ			7
Year End MWs	24	192	223



Solution = NYS Manufacturing

Gamesa Finalizes New U.S. Manufacturing Location

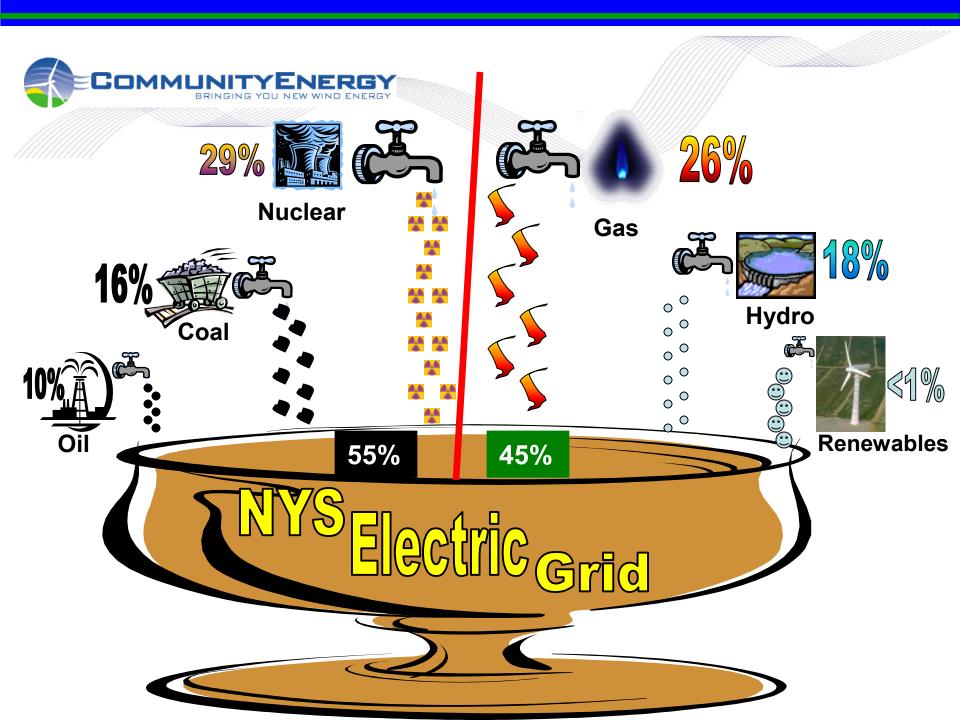
Ebensburg, Pennsylvania. Gamesa -- which had recently announced a plan to base a wind turbine generator blade manufacturing facility in Pennsylvania -- has now secured a location for their future facility in at the South Park Industrial Complex - located about 20 miles from Johnstown in Cambria County.

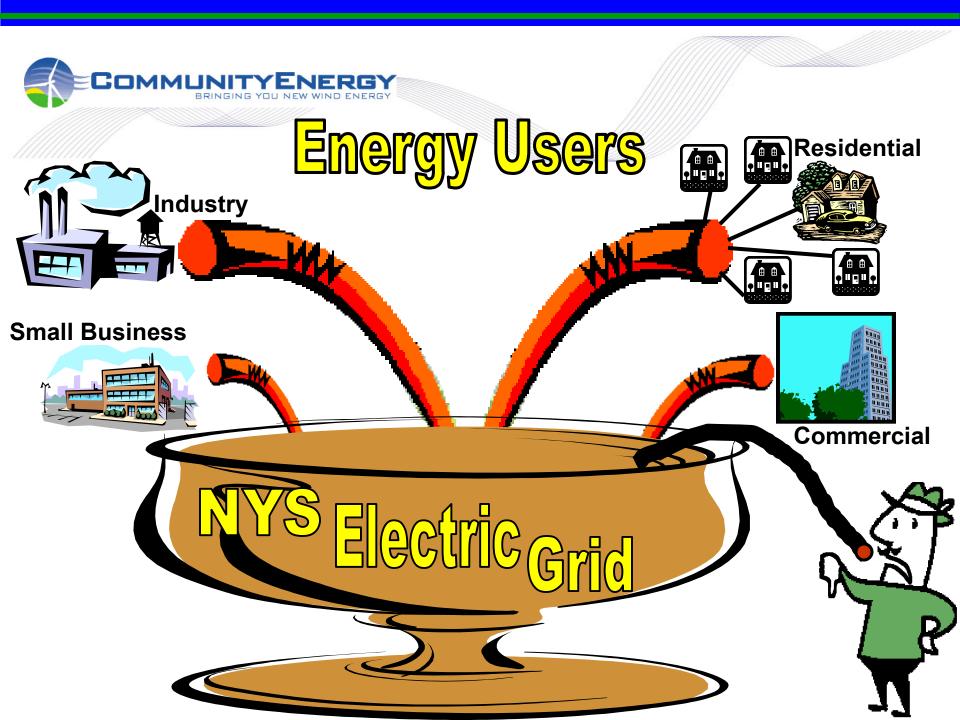
"Not only is this one of the most significant economic development announcements in decades for the Johnstown area, but it also represents a significant turnaround with Pennsylvania luring high-paying manufacturing jobs from overseas." - Gov. Edward G. Rendell

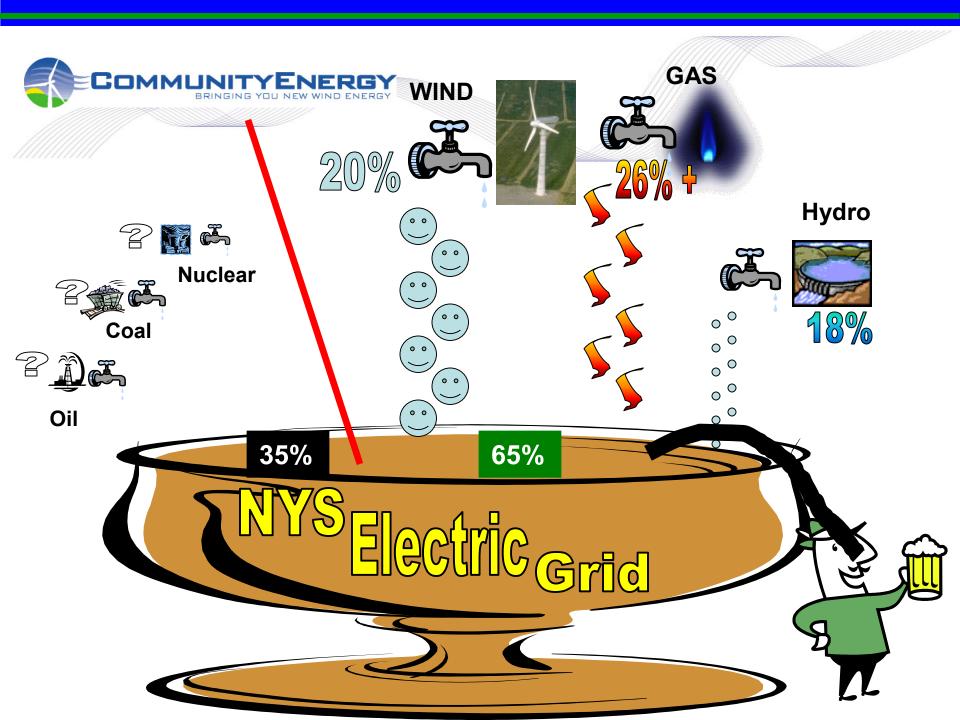
At a time when U.S. manufacturing operations are facing increasing pressure from abroad, the new facility will have major local impact on jobs and the economy.

The plant should create as many as 500 construction and operations jobs, including 250 permanent high-paying manufacturing positions.

"We are most impressed with Pennsylvania's recent initiatives in renewable energy...," said Inaki Lopez Gandasegui, Chief Executive Officer of Gamesa.









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